

I-Fields

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p#12

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/500,376

DATE: 07/18/2001

TIME: 13:26:09

Input Set : A:\A-67984 SL.txt

Output Set: N:\CRF3\07182001\I500376.raw

ENTERED

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3 <110> APPLICANT: University of Hawaii
5 <120> TITLE OF INVENTION: Baculovirus Produced Plasmodium Falciparum Vaccine
7 <130> FILE REFERENCE: A-67984
9 <140> CURRENT APPLICATION NUMBER: US 09/500,376
10 <141> CURRENT FILING DATE: 2000-02-08
12 <150> PRIOR APPLICATION NUMBER: US 08/195,705
13 <151> PRIOR FILING DATE: 1994-02-14
15 <160> NUMBER OF SEQ ID NOS: 16
17 <170> SOFTWARE: PatentIn version 3.1
19 <210> SEQ ID NO: 1
20 <211> LENGTH: 1219
21 <212> TYPE: DNA
22 <213> ORGANISM: Plasmodium falciparum
24 <400> SEQUENCE: 1
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27 acactctgca cgcggcgat atctgtcaca atggataata tcctctcagg atttgaaaat      120
29 gaatatgatg ttatatattt aaaaccttta gctggagtat atagaagctt aaaaaaacia      180
31 attgaaaaaa acattttttac atttaattta aatttgaacg atatcttaaa ttcacgtctt      240
33 aagaaacgaa aatattttctt agatgtatta gaatctgatt taatgcaatt taaacatata      300
35 tcctcaaagt aatacattat tgaagattca tttaaattat tgaattcaga acaaaaaaac      360
37 acacttttaa aaagttacaa atatataaaa gaatcagtag aaaatgatat taaatttgca      420
39 caggaaggta taagttatta tgaaaagggt ttagcgaaat ataaggatga tttagaatca      480
41 attaaaaaag ttatcaaaga agaaaaggag aagttcccat catcaccacc aacaacacct      540
43 ccgtcaccag caaaaacaga cgaacaaaag aaggaaagta agttccttcc atttttaaca      600
45 aacattgaga ccttatacaa taacttagtt aataaaattg acgattactt aattaactta      660
47 aaggcaaaga ttaacgattg taatgttgaa aaagatgaag cacatgttaa aataactaaa      720
49 cttagtgatt taaaagcaat tgatgacaaa atagatcttt ttaaaaacca taacgacttc      780
51 gaagcaatta aaaaattgat aaatgatgat acgaaaaaag atatgcttgg caaattactt      840
53 agtacaggat tagttcaaaa ttttccta atacaataat caaaattaat tgaaggaaaa      900
55 ttccaagata tgtaaacaat ttcacaacac caatgcgtaa aaaaacaatg tccagaaaat      960
57 tctggatggt tcagacattt agatgaaaga gaagaatgta aatgtttatt aaattacaaa     1020
59 caagaagggt ataaatgtgt tgaaaatcca aatcctactt gtaacgaaaa taatggtgga     1080
61 tgtgatgcag atgccaaatg taccgaagaa gattcaggta gcaacggaaa gaaaatcaca     1140
63 tgtgaatgta ctaaacctga ttcttatcca cttttcgatg gtattttctg cagtttagtag     1200
65 tcgacccttg gaaggatcc                                     1219
68 <210> SEQ ID NO: 2
69 <211> LENGTH: 394
70 <212> TYPE: PRT
71 <213> ORGANISM: plasmodium falciparum
73 <400> SEQUENCE: 2
75 Ala Ile Ser Val Thr Met Asp Asn Ile Leu Ser Gly Phe Glu Asn Glu
76 1           5           10           15
79 Tyr Asp Val Ile Tyr Leu Lys Pro Leu Ala Gly Val Tyr Arg Ser Leu
80           20           25           30
83 Lys Lys Gln Ile Glu Lys Asn Ile Phe Thr Phe Asn Leu Asn Leu Asn
84           35           40           45
87 Asp Ile Leu Asn Ser Arg Leu Lys Lys Arg Lys Tyr Phe Leu Asp Val

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88      50      55      60
91 Leu Glu Ser Asp Leu Met Gln Phe Lys His Ile Ser Ser Asn Glu Tyr
92 65      70      75      80
95 Ile Ile Glu Asp Ser Phe Lys Leu Leu Asn Ser Glu Gln Lys Asn Thr
96      85      90      95
99 Leu Leu Lys Ser Tyr Lys Tyr Ile Lys Glu Ser Val Glu Asn Asp Ile
100      100      105      110
103 Lys Phe Ala Gln Glu Gly Ile Ser Tyr Tyr Glu Lys Val Leu Ala Lys
104      115      120      125
107 Tyr Lys Asp Asp Leu Glu Ser Ile Lys Lys Val Ile Lys Glu Glu Lys
108      130      135      140
111 Glu Lys Phe Pro Ser Ser Pro Pro Thr Thr Pro Pro Ser Pro Ala Lys
112 145      150      155      160
115 Thr Asp Glu Gln Lys Lys Glu Ser Lys Phe Leu Pro Phe Leu Thr Asn
116      165      170      175
119 Ile Glu Thr Leu Tyr Asn Asn Leu Val Asn Lys Ile Asp Asp Tyr Leu
120      180      185      190
123 Ile Asn Leu Lys Ala Lys Ile Asn Asp Cys Asn Val Glu Lys Asp Glu
124      195      200      205
127 Ala His Val Lys Ile Thr Lys Leu Ser Asp Leu Lys Ala Ile Asp Asp
128      210      215      220
131 Lys Ile Asp Leu Phe Lys Asn His Asn Asp Phe Glu Ala Ile Lys Lys
132 225      230      235      240
135 Leu Ile Asn Asp Asp Thr Lys Lys Asp Met Leu Gly Lys Leu Leu Ser
136      245      250      255
139 Thr Gly Leu Val Gln Asn Phe Pro Asn Thr Ile Ile Ser Lys Leu Ile
140      260      265      270
143 Glu Gly Lys Phe Gln Asp Met Leu Asn Ile Ser Gln His Gln Cys Val
144      275      280      285
147 Lys Lys Gln Cys Pro Glu Asn Ser Gly Cys Phe Arg His Leu Asp Glu
148      290      295      300
151 Arg Glu Glu Cys Lys Cys Leu Leu Asn Tyr Lys Gln Glu Gly Asp Lys
152 305      310      315      320
155 Cys Val Glu Asn Pro Asn Pro Thr Cys Asn Glu Asn Asn Gly Gly Cys
156      325      330      335
159 Asp Ala Asp Ala Lys Cys Thr Glu Glu Asp Ser Gly Ser Asn Gly Lys
160      340      345      350
163 Lys Ile Thr Cys Glu Cys Thr Lys Pro Asp Ser Tyr Pro Leu Phe Asp
164      355      360      365
167 Gly Ile Phe Cys Ser Ser Ser Asn Phe Leu Gly Ile Ser Phe Leu Leu
168      370      375      380
171 Ile Leu Met Leu Ile Leu Tyr Ser Phe Ile
172 385      390
175 <210> SEQ ID NO: 3
176 <211> LENGTH: 394
177 <212> TYPE: PRT
178 <213> ORGANISM: plasmodium falciparum
180 <400> SEQUENCE: 3
182 Ala Ile Ser Val Thr Met Asp Asn Ile Leu Ser Gly Phe Glu Asn Glu

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183 1           5           10           15
186 Tyr Asp Val Ile Tyr Leu Lys Pro Leu Ala Gly Val Tyr Arg Ser Leu
187           20           25           30
190 Lys Lys Gln Ile Glu Lys Asn Ile Ile Thr Phe Asn Leu Asn Leu Asn
191           35           40           45
194 Asp Ile Leu Asn Ser Arg Leu Lys Lys Arg Lys Tyr Phe Leu Asp Val
195           50           55           60
198 Leu Glu Ser Asp Leu Met Gln Phe Lys His Ile Ser Ser Asn Glu Tyr
199 65           70           75           80
202 Ile Ile Glu Asp Ser Phe Lys Leu Leu Asn Ser Glu Gln Lys Asn Ile
203           85           90           95
206 Leu Leu Lys Ser Tyr Lys Tyr Ile Lys Glu Ser Val Glu Asn Asp Ile
207           100          105          110
210 Lys Phe Ala Gln Glu Gly Ile Ser Tyr Tyr Glu Lys Val Leu Ala Lys
211           115          120          125
214 Tyr Lys Asp Asp Leu Glu Ser Ile Lys Lys Val Ile Lys Glu Glu Lys
215           130          135          140
218 Glu Lys Phe Pro Ser Ser Pro Pro Thr Thr Pro Pro Ser Pro Ala Lys
219 145           150          155          160
222 Thr Asp Glu Gln Lys Lys Glu Ser Lys Phe Leu Pro Phe Leu Thr Asn
223           165          170          175
226 Ile Glu Thr Leu Tyr Asn Asn Leu Val Asn Lys Ile Asp Asp Tyr Leu
227           180          185          190
230 Ile Asn Leu Lys Ala Lys Ile Asn Asp Cys Asn Val Glu Lys Asp, Glu
231           195          200          205
234 Ala His Val Lys Ile Thr Lys Leu Ser Asp Leu Lys Ala Ile Asp Asp
235           210          215          220
238 Lys Ile Asp Leu Phe Lys Asn Thr Asn Asp Phe Glu Ala Ile Lys Lys
239 225           230          235          240
242 Leu Ile Asn Asp Asp Thr Lys Lys Asp Met Leu Gly Lys Leu Leu Ser
243           245          250          255
246 Thr Gly Leu Val Gln Ile Phe Pro Asn Thr Ile Ile Ser Lys Leu Ile
247           260          265          270
250 Glu Gly Lys Phe Gln Asp Met Leu Asn Ile Ser Gln His Gln Cys Val
251           275          280          285
254 Lys Lys Gln Cys Pro Glu Asn Ser Gly Cys Phe Arg His Leu Asp Glu
255           290          295          300
258 Arg Glu Glu Cys Lys Cys Leu Leu Asn Tyr Lys Gln Glu Gly Asp Lys
259 305           310          315          320
262 Cys Glu Glu Asn Pro Asn Pro Thr Cys Asn Glu Asn Asn Gly Gly Cys
263           325          330          335
266 Asp Ala Asp Ala Thr Cys Thr Glu Glu Asp Ser Gly Ser Ser Arg Lys
267           340          345          350
270 Lys Ile Thr Cys Glu Cys Thr Lys Pro Asp Ser Tyr Pro Leu Phe Asp
271           355          360          365
274 Gly Ile Phe Cys Ser Ser Ser Asn Phe Leu Gly Ile Ser Phe Leu Leu
275           370          375          380
278 Ile Leu Met Leu Ile Leu Tyr Ser Phe Ile
279 385           390

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282 <210> SEQ ID NO: 4
283 <211> LENGTH: 375
284 <212> TYPE: PRT
285 <213> ORGANISM: plasmodium falciparum
287 <400> SEQUENCE: 4
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290 1 5 10 15
293 Glu Tyr Glu Val Leu Tyr Leu Lys Pro Leu Ala Gly Val Tyr Arg Ser
294 20 25 30
297 Leu Lys Lys Gln Leu Glu Asn Asn Val Met Thr Phe Asn Val Asn Val
298 35 40 45
301 Lys Asp Ile Leu Asn Ser Pro Phe Asn Lys Arg Glu Asn Phe Lys Asn
302 50 55 60
305 Val Leu Glu Ser Asp Leu Ile Pro Tyr Lys Asp Leu Thr Ser Ser Asn
306 65 70 75 80
309 Tyr Val Val Lys Asp Pro Tyr Lys Phe Leu Asn Lys Glu Lys Arg Asp
310 85 90 95
313 Lys Phe Leu Ser Ser Tyr Asn Tyr Ile Lys Asp Ser Ile Asp Thr Asp
314 100 105 110
317 Ile Asn Phe Ala Asn Asp Val Leu Gly Tyr Tyr Lys Ile Leu Ser Glu
318 115 120 125
321 Lys Tyr Lys Ser Asp Leu Asp Ser Ile Lys Lys Tyr Ile Asn Asp Lys
322 130 135 140
325 Gln Gly Glu Asn Glu Lys Tyr Leu Pro Phe Leu Asn Asn Ile Glu Thr
326 145 150 155 160
329 Leu Tyr Lys Thr Val Asn Asp Lys Ile Asp Leu Phe Val Ile His Leu
330 165 170 175
333 Glu Ala Lys Val Leu Asn Tyr Thr Tyr Glu Lys Ser Asn Val Glu Ile
334 180 185 190
337 Lys Glu Leu Ile Tyr Leu Lys Thr Ile Gln Asp Lys Leu Ala Asp Phe
338 195 200 205
341 Lys Lys Asn Asn Asn Phe Val Gly Ile Ala Asp Leu Ser Thr Asp Tyr
342 210 215 220
345 Asn His Asn Asn Leu Leu Thr Lys Phe Leu Ser Thr Gly Met Val Phe
346 225 230 235 240
349 Glu Asn Leu Leu Lys Ser Ile Leu Ser Asn Leu Leu Asp Trp Lys Leu
350 245 250 255
353 Ala Arg Tyr Val Lys His Phe Thr Thr Pro Met Arg Lys Lys Thr Met
354 260 265 270
357 Ile Gln Gln Asn Ser Gly Cys Phe Arg His Leu Asp Glu Arg Glu Glu
358 275 280 285
361 Cys Lys Cys Leu Leu Asn Tyr Lys Gln Glu Gly Ser Lys Cys Val Glu
362 290 295 300
365 Asn Pro Asn Pro Thr Cys Asn Glu Asn Asn Gly Gly Cys Asp Ala Asp
366 305 310 315 320
369 Ala Lys Cys Thr Glu Glu Asp Ser Gly Ser Asn Gly Lys Lys Ile Thr
370 325 330 335
373 Cys Gln Cys Thr Lys Pro Asp Ser Tyr Pro Leu Ser Met Val Ile Phe
374 340 345 350

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377 Cys Ser Ser Ser Asn Phe Leu Gly Ile Ser Phe Leu Leu Ile Leu Met
378      355      360      365
381 Leu Ile Leu Tyr Ser Phe Ile
382      370      375
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386 <211> LENGTH: 377
387 <212> TYPE: PRT
388 <213> ORGANISM: plasmodium falciparum
390 <400> SEQUENCE: 5
392 Ala Val Thr Thr Ser Val Ile Asp Asn Ile Leu Ser Lys Ile Glu Asn
393 1      5      10      15
396 Glu Tyr Glu Val Leu Tyr Leu Lys Pro Leu Ala Gly Val Tyr Arg Ser
397      20      25      30
400 Leu Lys Lys Gln Leu Glu Asn Asn Val Met Thr Phe Asn Val Asn Val
401      35      40      45
404 Lys Asp Ile Leu Asn Ser Arg Phe Asn Lys Arg Glu Asn Phe Lys Asn
405      50      55      60
408 Val Leu Glu Ser Asp Leu Ile Pro Tyr Lys Asp Leu Thr Ser Ser Asn
409 65      70      75      80
412 Tyr Val Val Lys Asp Pro Tyr Lys Phe Leu Asn Lys Glu Lys Arg Asp
413      85      90      95
416 Lys Phe Leu Ser Ser Tyr Asn Tyr Ile Lys Asp Ser Ile Asp Thr Asp
417      100     105     110
420 Ile Asn Phe Ala Asn Asp Val Leu Gly Tyr Tyr Lys Ile Leu Ser Glu
421      115     120     125
424 Lys Tyr Lys Ser Asp Leu Asp Ser Ile Lys Lys Tyr Ile Asn Asp Lys
425      130     135     140
428 Gln Gly Glu Asn Glu Lys Tyr Leu Pro Phe Leu Asn Asn Ile Glu Thr
429 145     150     155     160
432 Leu Tyr Lys Thr Val Asn Asp Lys Ile Asp Leu Phe Val Ile His Leu
433      165     170     175
436 Glu Ala Lys Val Leu Asn Tyr Thr Tyr Glu Lys Ser Asn Val Glu Val
437      180     185     190
440 Lys Ile Lys Glu Leu Asn Tyr Leu Lys Thr Ile Gln Asp Lys Leu Ala
441      195     200     205
444 Asp Phe Lys Lys Asn Asn Asn Phe Val Gly Ile Ala Asp Leu Ser Thr
445      210     215     220
448 Asp Tyr Asn His Asn Asn Leu Leu Thr Lys Phe Leu Ser Thr Gly Met
449 225     230     235     240
452 Val Phe Glu Asn Leu Leu Lys Ser Val Leu Ser Asn Leu Leu Asp Trp
453      245     250     255
456 Lys Leu Ala Arg Tyr Val Lys His Phe Thr Thr Pro Met Arg Lys Lys
457      260     265     270
460 Thr Met Ile Gln Gln Ser Ser Gly Cys Phe Arg His Leu Asp Glu Arg
461      275     280     285
464 Glu Glu Cys Lys Cys Leu Leu Asn Tyr Lys Gln Glu Gly Asp Lys Cys
465      290     295     300
468 Val Glu Asn Pro Asn Pro Thr Cys Asn Glu Asn Asn Gly Gly Cys Asp
469 305     310     315     320

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VERIFICATION SUMMARY

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